



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

May 8, 2018

Tiana Rosamilia  
Manager  
Evonik Corporation  
299 Jefferson Road  
Parsippany, NJ 07054

Subject: PRIA Label Amendment – Revised to Add Organism to Food Contact Surface  
Sanitization  
Product Name: Peraclean 5  
EPA Registration Number: 54289-3  
Application Date: 12/14/2017  
Decision Number: 536949

Dear Ms. Rosamilia:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

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Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Terria Northern by phone at 703-347-0265, or via email at [northern.terria@epa.gov](mailto:northern.terria@epa.gov).

Sincerely,

A handwritten signature in blue ink, appearing to read 'Zeno Bain', with a long horizontal stroke extending to the right.

Zeno Bain, Product Manager 33  
Regulatory Management Branch I  
Antimicrobials Division (7510P)  
Office of Pesticide Programs

Enclosure: Approved label

#### DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

#### PRE-TREATMENT PRIOR TO SANITIZATION OF FOOD-CONTACT SURFACES

PERACLEAN® 5 can be used as a pre-treatment on food contact prior to sanitization. For use dilute 3.5 -17.5 fl. oz. of PERACLEAN® 5 in 5 gallons of water, this will provide 300-1500 ppm peroxyacetic acid. Let soak for 15 minutes and follow with a potable water rinse.

#### SANITIZATION

**NOTE:** FOR MECHANICAL OPERATIONS prepared use solution may not be used for subsequent sanitizing but may be reused for other purposes such as cleaning. FOR MANUAL OPERATIONS fresh sanitizing solutions should be prepared at least daily or more often if the solution becomes diluted or soiled.

PERACLEAN® 5 peroxyacetic acid sanitizer is recommended for use on pre-cleaned surfaces such as equipment, pipelines, tanks, vats, fillers, evaporators, pasteurizers and aseptic equipment in dairies, breweries, wineries, beverage and food processing/packing plants, egg processing/packing equipment surfaces, and eating establishments. This product is effective as a sanitizer when solution is prepared in water of up to 400 ppm hardness as CaCO<sub>3</sub>. This product has demonstrated greater than a 99.99% reduction of survivors after a 60 second exposure period in the AOAC Germicidal and Detergent Sanitizing Action of Disinfectants study.

#### SANITIZATION OF CONVEYORS AND EQUIPMENT FOR MEAT, POULTRY, SEAFOOD, FRUIT, NUTS AND VEGETABLES.

For use in the slatline or continuous sanitizing, washing or rinsing of conveyors, slicers, saws, and equipment, apply a solution of this product using 1.15-7.0 oz. per 8 gallons of water (82 ppm to 500 ppm active peroxyacetic acid) to pre-cleaned surface. Apply sanitizing solution to the return portion of the conveyor or equipment using coarse spray or similar means of wetting surfaces, so as to affect drainage and prevent puddling. Allow sanitizer to thoroughly wet surface for a minimum 60 seconds contact time. No rinse is needed.

#### SANITIZING FOOD CONTACT SURFACES

Effective against *Staphylococcus aureus* [ATCC 6538] and *Escherichia coli* [ATCC11229], *Pseudomonas Aeruginosa* [ATCC 15442], *Salmonella typhimurium* [ATCC 23564] and *Listeria Monocytogenes* [ATCC 19117]

Prior to sanitizing, remove gross food particles, then wash with a detergent solution followed by a potable water rinse. Sanitize with a concentration of 1.0 to 1.5 fl. oz. PERACLEAN® 5 dissolved in 5 gallons of water (0.16 to 0.22% w/v concentration). This will provide 88 to 130 ppm of peroxyacetic acid. At this dilution PERACLEAN® 5 is effective against *Staphylococcus aureus* and *Escherichia coli* and *Salmonella typhimurium* [ATCC 23564]. For use against *Pseudomonas aeruginosa* prepare a sanitizing solution by adding 2.1 to 2.3 fl. oz. PERACLEAN® 5 dissolved in 5 gallons of water. This will provide 180-200 ppm of peroxyacetic acid. For use against *Listeria monocytogenes* prepare a sanitizing solution by adding 2.3 fl. oz. PERACLEAN® 5 dissolved in 5 gallons of water. This will provide 200 ppm of peroxyacetic acid. Use immersion, coarse spray or circulation techniques as appropriate to the equipment. All surfaces should be exposed to the sanitizing solution for a period of at least 60 seconds or more if specified by governing sanitary code. Allow sanitized surfaces to adequately drain before contact with food so that little or no residue remains. Do not rinse.

#### SANITIZING, EATING, DRINKING AND FOOD PREP UTENSILS

Remove gross food particles by a pre-scrub, a pre-rinse and, when necessary, a pre-soak treatment. Wash with a recommended detergent. Rinse with clean water. Sanitize in a solution of 1.0 to 1.5 fl. oz. PERACLEAN® 5 dissolved in 5 gallons of water. Immerse all utensils for at least 60 seconds or contact time specified by governing sanitary code. Drain and air dry.

#### SANITIZING TABLEWARE

For sanitizing tableware in low temperature warewashing machines, inject PERACLEAN® 5 into the final rinse water at a concentration of 1.0 to 1.5 fl. oz. PERACLEAN® 5 dissolved in 5 gallons of water. Do not exceed 0.16 to 0.22% w/v. Air dry. This will provide 88 to 130 ppm of peroxyacetic acid. To insure that the PERACLEAN® 5 sanitizer concentration does not fall below 48 ppm peroxyacetic acid, periodically test the rinse solution with a suitable test kit and adjust the dispensing rate accordingly. Consult your technical service representative for assistance and further information on sanitizing tableware in warewashing machines.

#### FOAM SANITIZATION

PERACLEAN® 5 can be applied as a foam for sanitization for previously clean, hard non-porous food contact surfaces and general environmental (non-food contact) hard non-porous surfaces such as floors, walls, ceilings, drains, and boots. Foam applications can be used where penetration and retention of product for required times is difficult to achieve. For example, uses that include operating conveyor belts and vertical or uneven surfaces.

1. Prepare a dilute PERACLEAN® 5 solution by adding 1.2 to 2.3 fl. oz. per 5 gallons of potable water.
2. After preparing the PERACLEAN® 5 solution add 1.2 to 10.0 fl. oz. of AGRHO FM-2011. AGRHO FM-2011 is the only approved foam-generating additive for use with PERACLEAN® 5
3. Apply the sanitizing solution as a foam using commercially available foam generating equipment. Allow foam to contact surfaces at least one minute. For foot bath application, allow foam to remain on foot surface for one minute upon exiting the bath.
4. Drain items and or surfaces thoroughly.

#### ANTIMICROBIAL RINSE OF PRE-CLEANED OR NEW RETURNABLE OR NON-RETURNABLE CONTAINERS

To reduce the number of non-pathogenic beverage spoilage organisms. Effective against *Aspergillus versicolor* [ATCC 9571], *Byssosclamosis tulva* [ATCC 10099], *Pedococcus dammosus* [ATCC 29358], *Lactobacillus buchneri* [ATCC4005], and *Saccharomyces cerevisiae* [ATCC47056]

1. Prepare PERACLEAN® 5 solution by adding 31 fl. oz. to 5 gallons potable water. This provides 2,532 ppm peroxyacetic acid.
2. Apply antimicrobial rinse at a temperature of 40°C to 60°C (104°F to 140°F) and

#### HARD SURFACE DISINFECTION

PERACLEAN® 5 disinfects as it cleans in one operation. PERACLEAN® 5 can be used to disinfect floors, walls and other hard nonporous surfaces such as tables, chairs, countertops, bathroom fixtures, sinks, bed frames, shelves, racks, carts, refrigerators, coolers, tile and use sites on this label made from linoleum, vinyl, non-porous glazed porcelain, plastic (such as polypropylene and polyethylene), stainless steel, or glass.

#### COMBINATION DISINFECTANT AND CLEANING

PERACLEAN® 5 is effective against *Staphylococcus aureus*, *Salmonella choleraesuis* [ATCC10708], *Trichophyton mentagrophytes* [ATCC 9533], and *Escherichia coli* 0157:H7 [ATCC 35150] at 0.23% (1.5 fl. oz./5 gal.) in hard water (400 ppm as CaCO<sub>3</sub>) and 5% fetal bovine serum on hard nonporous surfaces. For heavily soiled areas a pre-cleaning step is required. Apply solution with mop, cloth, sponge, brush, scrubber, or coarse spray device, or by soaking so as to wet all surfaces thoroughly. Allow to remain wet for 10 minutes, then remove solution and entrapped soil with a clean wet mop, cloth, or wet vacuum pickup. Prepare a fresh solution daily or when it becomes soiled or diluted. When used according to the directions for disinfection, PERACLEAN® 5 is specifically designed to disinfect, deodorize and clean inanimate, hard, surfaces such as walls, floors, sink tops, and furniture. In addition PERACLEAN® 5 will deodorize those areas which are generally hard to keep smelling fresh such as, garbage storage areas, empty garbage bins and cans, and any other areas which are prone to odors caused by microorganisms.

All treated equipment that will contact food, feed, or drinking water must be rinsed with potable water before use. For heavily soiled areas, a pre-cleaning step is required. Prepare a fresh solution for each use.

#### BATCH SANITIZATION (NON FOOD CONTACT SURFACES) OF ULTRA FILTRATION AND REVERSE OSMOSIS (RO) MEMBRANES

PERACLEAN® 5 can be used for the sanitization of ultra filtration, medical and non-medical institutional/industrial reverse osmosis (RO) membranes and their associated distribution systems.

This product has been shown to be an effective disinfectant when tested by AOAC and EPA methods. This product may not eliminate all vegetative microorganisms in reverse osmosis membranes and their associated piping systems due to their construction and/or assembly, but can be relied upon to reduce the number of microorganisms to acceptable levels when used as directed. Check with equipment manufacturer for membrane compatibility with PERACLEAN® 5.

Remove biological or organic fouling from the membrane or other parts of the system with an appropriate cleaner. Flush the system with RO permeate or similar quality water. Remove mineral deposits with suitable acidic cleaner prior to sanitizing the membranes with PERACLEAN® 5. Flush the system again with the RO permeate or similar quality water. Prepare an appropriate volume of 1% solution of the product (1 gallon of PERACLEAN® 5 to 100 gallons of water). This will provide 549 ppm of peroxyacetic acid and 2,967 ppm hydrogen peroxide. Fill the entire water circuit to be sanitized with the dilute solution and allow the solution to reach a minimum of 20°C (68°F). Re-circulate the dilute solution of PERACLEAN® 5 for a minimum of 10 minutes. Allow membrane elements to soak in the solution for a minimum of 20 minutes. Rinse the RO system and test for residuals to ensure that there is less than 3 ppm peroxigen. Diverting product water to drain can reduce residuals.

#### BATCH SANITIZATION (NON FOOD CONTACT SURFACES) OF PIPING

#### SYSTEMS ASSOCIATED WITH RO MEMBRANES

Isolate incompatible equipment from piping system. This includes activated carbon filters and ion exchange equipment. Turn off power to ultraviolet light units. Estimate total volume of water contained in the system (tanks, rinse stations and piping). Prepare an appropriate volume of 1.0 to 1.5% PERACLEAN® 5 by adding 1.0 to 1.5 gallons of the product to every 100 gallons of solution prepared. Use RO permeate or similar quality water for dilution. This will provide 549 to 823 ppm peroxyacetic acid and 2,967 to 4,450 ppm hydrogen peroxide. Re-circulate the dilute PERACLEAN® 5 solution through the system for a minimum of 4 hours. Process usage valves should be opened and closed to expose internals to the PERACLEAN® 5. Completely drain the system of dilute PERACLEAN® 5 solution. Thoroughly rinse the system by filling with RO permeate or similar quality water and re-circulate before drainage. Repeat the process until test for residuals indicates there is less than 3 ppm peroxigen.



# PERACLEAN® 5

## (PEROXYACETIC ACID SOLUTION)

### PERACLEAN® 5 IS A PEROXYACETIC ACID-BASED SANITIZER/ DISINFECTANT DEVELOPED FOR THE FOLLOWING USES:

<b>Institutional/Industrial Sanitizing of Previously Cleaned Non-Porous Food Contact Surfaces in:</b> <ul style="list-style-type: none"><li>•Dairies</li><li>•Wineries</li><li>•Breweries</li><li>•Food and Beverage Plants</li><li>•Disinfecting Poultry Premises</li><li>•Poultry Hatcheries</li><li>•Animal Housing Facilities</li><li>•Reverse Osmosis Membranes and Ultra Filtration</li></ul>	<b>Hard Surface Disinfection in:</b> <ul style="list-style-type: none"><li>•Industrial Facilities</li><li>•Office Buildings</li><li>•Recreational Facilities</li><li>•Retail and Wholesale Establishments</li></ul>	Active Ingredients:	
		Hydrogen Peroxide	26.5%
		Peroxyacetic Acid	4.9%
		Inert Ingredients	68.6%
		Total:	100%
Net contents as stated on container			
<b>EPA Reg No: 54289-3</b>			
<b>EPA ESTAB. NO: 70547-IL-001 70253-CA-002</b>			
Label not for use in California			

Before Using This Product, Please Read This Entire Label Carefully.

KEEP OUT OF REACH OF CHILDREN

# DANGER

#### FIRST AID

If in eyes: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call poison control center or doctor for treatment advice.

If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call poison control center or doctor for treatment advice.

If swallowed: Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person. Call poison control center or doctor for treatment advice.

If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Get medical attention. Probable mucosal damage may contraindicate the use of gastric lavage.

#### PRECAUTIONARY STATEMENTS

##### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**DANGER CORROSIVE.** Causes irreversible eye damage and skin burns. May be fatal if inhaled or absorbed through the skin. Harmful if swallowed. Do not breathe vapors or spray mist. Do not get in eyes on skin or on clothing. Wear goggles and or face shield and rubber gloves when handling. Do not enter an enclosed area without proper respiratory protection. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash before reuse.

##### PHYSICAL AND CHEMICAL HAZARDS

**STRONG OXIDIZING AGENT.** Corrosive. Mix only with water. Product must be diluted in accordance with label directions prior to use. PERACLEAN® 5 is not combustible; however, at temperatures exceeding 156°F, decomposition occurs releasing oxygen. The oxygen released could initiate combustion.

##### ENVIRONMENTAL HAZARDS

This pesticide is toxic to birds, fish, and aquatic invertebrates. Caution should be used when applying indoors because pets may be at risk. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems other than previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the US Environmental Protection Agency.

#### STORAGE AND DISPOSAL

**Storage and Disposal:** Do not contaminate water, food, or feed by storage and disposal.

**PESTICIDE STORAGE:** Store in original containers in a cool, well-ventilated area, away from direct sunlight. Do not allow product to become overfilled in storage. This may cause increased degradation of the product, which will decrease product effectiveness. In case of spill, flood area with large quantities of water. Do not store in a manner where cross-contamination with other pesticides or fertilizers could occur.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Open dumping is prohibited. If wastes cannot be disposed of according to label directions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

**CONTAINER DISPOSAL:** Non-refillable container. Do not reuse or refill this container unless the directions for use allow a different (concentrated) product to be diluted in the container.

**Containers 5 gallons or greater:** Triple rinse (or equivalent) promptly after emptying. Triple rinse as follows: Empty remaining contents into application equipment or mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip the container on its side and roll it back and forth ensuring at least 1 complete revolution, for 30 seconds. Stand container on its end and tip back and forth several times. Empty rinse into application equipment, mix tank, or store for disposal. Then offer for recycling, or dispose in a sanitary landfill, or incineration if allowed by state and local authorities by burning.



Manufactured by:  
Evonik Corporation  
299 Jefferson Rd  
Parsippany, New Jersey 07054-0677

#### CONTINUOUS/INTERMITTENT ADDITION TO MINIMIZE THE ACCUMULATION OF BIOLOGICAL MATTER BETWEEN INTERMITTENT SANITIZING EPISODES IN PIPING SYSTEMS ASSOCIATED WITH RO MEMBRANES.

Do Not Use for Any Applications Involving Food or Drinking Water Contact. PERACLEAN® 5, as received or diluted, may be added continuously to the feed water system, between system sanitizing episodes, to aid in minimizing the re-growth/accumulation of biological matter. The peroxigen residual in the system which will be effective will vary with the design and usage characteristics of the system. Adjust the addition rate of PERACLEAN® 5 or the solution and periodically monitor residual peroxigen so that the desired effect is obtained, or continuous addition, do not exceed 200 ppm (1 fl. oz. of product per 440 gallons of water) PERACLEAN® 5. This will give 1 ppm peroxyacetic acid and 3 ppm hydrogen peroxide. For intermittent feed, do not exceed 2,000 ppm (23 fl. oz. of product per 100 gallons of water) PERACLEAN® 5. This will give 100 ppm peroxyacetic acid and 530 ppm hydrogen peroxide.

#### DISINFECTION OF PULP PREMISES, TRUCKS, COOPS AND CRATES

##### QUALITY HISTORY/ DISINFECTANT

Remove all poultry and feeds from premises, trucks, coops and crates. Remove all litter and droppings from floors, walls and surfaces of facilities occupied or traversed by poultry. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with a detergent and rinse with water. Saturate surfaces with a 0.23% (1.5 fl. oz./5 gal.) solution of PERACLEAN® 5 for a period of 10 minutes. Ventilate buildings, coops and other closed spaces. Do not house poultry or employ equipment until treatment has been absorbed, set or dried. Thoroughly scrub treated feed racks, troughs, automatic feeders, fountains and waterers with a detergent and rinse with potable water before reuse. See your technical representative for specific recommendations for all cleaning and rinsing requirements.

##### DISINFECTION AND DEODORIZING OF ANIMAL HOUSING FACILITIES (BARN, KENNELS, HUGHES, ETC.)

Do not use in milking stalls, milking parlors, or milk houses (for phenolics, cresylic acid, and pine oils). Remove animals and feed from premises, vehicles, and enclosures. Remove litter, waste matter, and gross soils from floors, walls and surfaces of barns, pens, stalls, chutes and other facilities and fixtures occupied or traversed by animals. Empty all troughs, racks and other feeding and watering equipment. Thoroughly clean all surfaces with detergent and rinse with water. Saturate surfaces with a 0.23% (1.5 fl. oz./5 gal.) solution of PERACLEAN® 5 for a period of 10 minutes. Immerse all halters, ropes, and other types of equipment used in handling and restraining animals, as well as forks, shovels, and scrapers used for removing litter and manure. Ventilate buildings, cars, boats, and other closed spaces. Do not house livestock or employ equipment until treatment has been absorbed, set, or dried. Thoroughly scrub all treated feed racks, mangers, troughs, automatic feeders, fountains, and waterers with soap or detergent, and rinse with potable water before reuse.

**CONTROL OF SLIME FORMING BACTERIA TO COOLING WATER SYSTEMS (COOLING TOWERS/ EVAPORATIVE CONDENSERS)**  
\*Severely fouled systems should be cleaned before adding the PERACLEAN® 5 solution. PERACLEAN® 5 should be added in the system directly and not mixed with any other chemicals or additives. Contamination with other chemicals could result in product decomposition.

\*Add PERACLEAN® 5 at a point in the system where uniform mixing and even distribution will occur.

\*Use 0.3 to 1.5 lb. (4.1 to 20.6 fl. oz.) of PERACLEAN® 5 per 1,000 gallons of solution as a continuous or intermittent slug treatment. This will provide 1.8 to 8.8 ppm peroxyacetic acid (36 to 180 ppm PERACLEAN® 5). Repeat treatment as required to maintain control.

**FOR TREATMENT OF RAW, UNPROCESSED FRUIT AND VEGETABLE SURFACES**  
PERACLEAN® 5 can be applied by fogging to control the growth of non-public health microorganisms that may cause decay and/or spoilage on raw, post-harvest fruits and vegetables during the post-harvest process. 1. Ensure room is properly ventilated. Vacate all personnel from room during fogging and for a minimum of 2 hours after fogging. Ensure there is no strong odor characteristic of acetic acid being having personnel return to work area. Do not enter room until hydrogen peroxide concentrations are correctly tested and are below 1 ppm on a time weighted average. 2. Fog areas using one quart of a 0.2% solution (3.5 fl. oz. per 16 gallons of water) per 1,000 cu. ft. of room volume. Allow surfaces to drain thoroughly before operations are resumed.

**FRUIT AND VEGETABLE WATER TREATMENT**  
This product may be used to help control spoilage or decay-causing bacteria and fungi in water or ice that contacts raw, unprocessed fruits and vegetables in commercial operations and packinghouses. PERACLEAN® 5 solution as a dip or spray to control the growth of non-public health microorganisms that may cause decay and/or spoilage on raw, post-harvest fruits and vegetables during the post-harvest process. This product can be applied during physical cleaning processes, including at the roller spreader, washer manifold, dip tank, on the brushes or elsewhere in the post-harvest process prior to, simultaneously with or after detergent wash. 1. Prepare dilute solution by diluting 1.12 to 3.5 fl. oz. per 16 gallons of water. This will provide 30 to 100 ppm of peroxyacetic acid. 2. Apply the diluted solution using a spray directed at the fruits or vegetables, or by soaking the fruits or vegetables in the solution. Allow a contact time of at least 45 seconds. 3. The treated produce can be drain dried without a potable water rinse.

**SURFACES TREATED TO CONTROL SPREAD OF CITRUS CANCKER**  
PERACLEAN® 5 can be used to control the spread of citrus canker between manmade surfaces and inanimate surfaces to plants. This product is for surfaces such as packing house conveyors and harvesting equipment and containers. This product is not for treatment of infected plants. PERACLEAN® 5 is an effective against microorganisms such as *Xanthomonas campestris* (axonopods) pathogens ornello (citrus canker surrogate).

1. Remove gross contamination with a cleaner or substitute detergent and rinse with potable water. 2. Use PERACLEAN® 5 at a dilution of 9.9 to 16.0 fl. oz. per 50 gallons of water (85-137.2 ppm peroxyacetic acid and 460-742 ppm of hydrogen peroxide) as a general purpose spray. 3. Allow to contact surface for at least one minute. 4. Follow to air dry, do not rinse.

**POST HARVEST SPRAY TREATMENTS ON PRODUCTION PACKING LINES**  
Inject PERACLEAN® 5 directly into spray, misting, humidification, fogging and spray bar system make up system water on process and packing lines to prevent bacterial and fungal diseases on postharvest fruits and vegetables. Inject at a rate of 0.6-0.23 fl. oz. of concentrate per gallon of clean water. This will provide 24 -100.0 ppm of peroxyacetic acid in the use solution. For best results, where dump tanks are used, make post harvest spray treatment as produce is leaving dump tanks. Applicable for use on all types of post harvest commodities.

**EMPORATORS, HUMIDIFICATION SYSTEMS AND/OR STORAGE TANKS**  
Treat water containing plant pathogens with 0.56-2.1 fl. oz. of PERACLEAN® 5 for every 10 gallons of water. This will provide 24 to 85 ppm peroxyacetic acid in the use solution.

**INFLUENT WATER SYSTEMS**  
PERACLEAN® 5 should be fed continuously to incoming fresh water streams (non-potable use only) at dosages ranging from 10 to 978 ppm peroxyacetic acid (200 to 20,000 ppm PERACLEAN® 5).

**CONTROL OF BACTERIA AND FUNGI IN NON-FOOD CONTACT DISPERSED PIGMENTS**  
PERACLEAN® 5 can be used in the control of bacteria and fungi in the manufacture and storage of dispersed pigments such as kaolin clay, titanium dioxide, calcium carbonate, calcium sulfate, barium sulfate, magnesium silicate and diatomaceous earth used in paint and paper production. Add 0.3 to 1.5 lbs. (4.1 to 20.6 fl. oz.) of PERACLEAN® 5 to each 1,000 lbs. of pigment slurry. This will provide 14.6 to 73.5 ppm peroxyacetic acid (300 to 1,500 ppm PERACLEAN® 5).

**MIL PROCESS WATERS**  
\*Continuous Feed - PERACLEAN® 5 should be fed continuously at dosages ranging from 10 to 978 ppm peroxyacetic acid (200 to 20,000 ppm PERACLEAN® 5). This range is equivalent to 0.4 to 40 lbs. PERACLEAN® 5 per ton (dry basis) of pulp or paper produced during the feed period. \*Intermittent Feed - PERACLEAN® 5 should be fed intermittently (6 to 8 times per day) at dosages ranging from 10 to 978 ppm peroxyacetic acid (200 to 20,000 ppm PERACLEAN® 5). This dosage is equivalent to 0.4 to 40 lbs. PERACLEAN® 5 per ton (dry basis) of pulp or paper produced during the feed period.

\*Shock Dose - PERACLEAN® 5 should be shock dosed at dosages ranging from 98 to 1,956 ppm peroxyacetic acid (2,000 to 40,000 ppm PERACLEAN® 5). This dosage may be equivalent to 4 to 80 lbs. PERACLEAN® 5 per ton (dry basis) of pulp or paper produced during the feed period.

\*Shock Dose - PERACLEAN® 5 should be shock dosed at dosages ranging from 98 to 1,956 ppm peroxyacetic acid (2,000 to 40,000 ppm PERACLEAN® 5). This dosage may be equivalent to 4 to 80 lbs. PERACLEAN® 5 per ton (dry basis) of pulp or paper produced during the feed period.